1A. No, every number does not have a prime factorization because prime number can’t be divided by other numbers, such as the number 17.

1B. A number only has one prime factorization. That is why we say “the” prime factorization instead of a prime factorization.

1C. It is important that one is not a prime number because prime numbers only have two factors which are one and itself. Example: 17- its factors are 1 and itself, so therefore it’s prime. One is different though because it only has one factor and that is itself.

2A. You can use prime factorizations of two numbers to find their least common multiple by finding the factorizations of a numbers and then find a common factor string.